REMARKS

The abstract of the disclosure has been amended to limit the length to less than 150 words.

Claims 3 and 6 have been amended to correct the informalities noted in the objections to the claims.

Claim 1 has been amended to include the additional limitation that the exhaust-gas purifying-use catalyst contain a fire-resistant inorganic oxide carrying the noble metal, the fire-resistant inorganic oxide being active alumina, titania, or zirconia, or a composite oxide thereof. Support for this limitation is found in the specification on page 8, lines 1-8, and page 10, lines 11-17.

A new claim 8 has been added to the application. New claim 8 limits the process for purifying an exhaust gas from gasoline of claim 1 to one where the gasoline engine of a fuel-direct-injection includes a cylinder that serves as a combustion chamber for gasoline as a fuel; an ignition plug; an injector that is used for injecting the fuel; a control section for controlling an ignition timing of the ignition plug and an amount of fuel injection of the injector, and in which the control section controls an air-fuel ratio depending on the injector so as to cause the gasoline engine to be in the second exhaust gas state. Support for this limitation

is found in the specification on page 17, line 11, to page 19, line 13.

A new claim 9 has been added to the application. New claim 9 limits the control section of the gasoline engine of claim 8 to one which controls an air-fuel ratio depending on the injector so that a temperature of the exhaust gas at an inlet of the catalyst is not more than 350°C so as to cause the gasoline engine to be in the second exhaust gas state. Support for this limitation is found in the specification on page 15, lines 1-20, and on page 17, line 11, to page 19, line 13.

A new claim 10 has been added to the application. New claim 10 limits the control section of the gasoline engine of claim 8 to one which controls an air-fuel ratio depending on the injector so that a temperature of the exhaust gas at an inlet of the catalyst is not more than 300°C so as to cause the gasoline engine to be in the second exhaust gas state. Support for this limitation is found in the specification on page 15, lines 1-20.

Finally, new claim 11 has been added to the application. New claim 11 corresponds to claim 1 as amended herein except that the exhaust gas is precisely recited as being contacted with a single exhaust-gas purifying-use catalyst composition.

Referring to the rejections in the Action, the rejection of claims 1-7 has been overcome by the amendment to claim 1 to include the additional limitation that the exhaust-gas purifying-use catalyst contains a fire-resistant inorganic oxide carrying the noble metal.

Claims 1, 2, 5 and 7 have been rejected under 35 U.S.C. § 102(e) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as being obvious over Hirota, U.S. Patent No. 5,211,010 ("Hirota"). Hirota is insufficient to support a rejection for anticipation under 35 U.S.C. § 102 and is insufficient to support a rejection for obviousness under 35 U.S.C. § 103(a) of claims 1, 2, 5 and 7 or of new claims 8-11 for the reasons discussed below.

A characteristic feature of the present invention is that, with respect to an exhaust gas from a gasoline engine of the fuel-direct-injection type, a single catalyst containing a noble metal can purify exhaust gas in respective states varying between a first exhaust gas state (high intensity) and a second exhaust gas state (low intensity, that is, low fuel consumption) in an oxidation atmosphere and in a lower temperature, in accordance with a variation of the air-fuel ratio, depending on the respective driving conditions. Thus, it is possible to simplify the

purification of the exhaust gas under all driving conditions.

In other words, even when the air-fuel ratio is set to be 15 or more, which reduces fuel consumption so as to establish the second exhaust gas state, the exhaust gas purifying catalyst containing a noble metal, which can purify the exhaust gas in the first exhaust gas state whose air-fuel ratio is set to be 14.7 (ideal air-fuel ratio), can also purify the exhaust gas in the second exhaust gas state, when using a gasoline engine of the fuel-direct-injection type, whose exhaust gas temperature can be kept low with ease, and by setting the exhaust gas temperature at the inlet of the catalyst to be not more than 500°C, preferably not more than 350°C and, more preferably, not more than 300°C.

The gasoline engine of the fuel-direct-injection type of the present invention uses gasoline (hydrocarbon having 5 to 9 carbon atoms) as fuel, and compresses air while mixing the gasoline and introduced air with each other, and ignites the air with an ignition plug.

On the other hand, the invention disclosed in Hirota is an exhaust gas purification system for a diesel engine. A diesel engine uses light oil (hydrocarbon having 11 to 19 carbon atoms) as fuel, and sprays the light oil into air, which has been compressed so as to have a high temperature (approximately 700°C) after

finishing the compressing step with a piston, or into air around a position in which the compressing step is finished, thereby automatically igniting the fuel without using an ignition plug. Further, the catalyst used in Hirota includes zirconia in the catalyst as an essential component.

Hirota is insufficient to support a case of anticipation under 35 U.S.C. § 102 because Hirota fails to disclose each of the limitations of claims 1-11. A diesel engine is not a gasoline engine and the exhaust gas from a diesel engine is not an exhaust gas from a gasoline engine of the fuel-direct-injection type. Moreover, a diesel engine does not include the structure of a gasoline engine of the fuel-direct-injection type as recited in new claims 8 to 10. Removal of the 35 U.S.C. § 102 rejection is in order.

Hirota is also insufficient to support a case of prima facie obviousness of the claims in the application. The exhaust gas purification system for a diesel engine of Hirota cannot be properly modified under 35 U.S.C. § 103(a) by substituting a gasoline engine of the fuel-direct-injection type for a diesel engine. Such substitution would destroy the invention on which Hirota is based. Furthermore, the Office has not shown a teaching, suggestion or motive in the prior art for <u>any</u>

modification of the system of Hirota. Removal of the 35 U.S.C. § 103(a) rejection based on Hirota is in order.

Claims 3 and 4 stand rejected under 35 U.S.C. § 103(a) as being obvious over Hirota in view of "legal precedent." Removal of this rejection is also in order. Claims 3 and 4 depend directly and indirectly, respectively, from claim 1. Claim 1 has been shown to be patentable under 35 U.S.C. § 103(a) over Hirota. Claims 3 and 4, therefore, are prima facie patentable. Legal precedent cannot overcome the deficiencies of Hirota to support a prima facie case of obviousness of the process of claim 1 and the claims that depend, directly or indirectly, thereon.

The foregoing is believed to be a complete and proper response to the Office Action dated April 20, 2004, and is believed to place this application in condition for allowance. If, however, minor issues remain that can be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number indicated below.

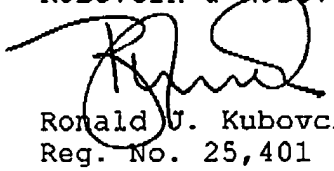
In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to our Deposit Account No. 111833.

PATENT APPLN. NO. 10/600,571 **PATENT**
RESPONSE UNDER 37 C.F.R. §1.111 **NON-FINAL**

In the event any additional fees are required, please also charge our Deposit Account No. 111833.

Respectfully submitted,

KUBOVCIK & KUBOVCIK



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